



1930055 - R8 SEMS

Ackerman, Joyce

From: Patrick Medland <PMedland@Geosyntec.com>
Sent: Thursday, May 3, 2018 12:19 PM
To: Sandusky, Eric
Cc: Ackerman, Joyce
Subject: Phase 2A Stockpile Data
Attachments: J77183-1 UDS Level 2 Report Final Report.pdf

Eric,

Attached is the Phase 2A stockpile data. Please note the sample ID that includes "SP109" is a duplicate sample. The other 8 samples are from discreet stockpiles labeled 101-108. Please let me know EPA's position on the future location of these soils (on or off site).

Thanks,
Patrick

Patrick Medland
Scientist

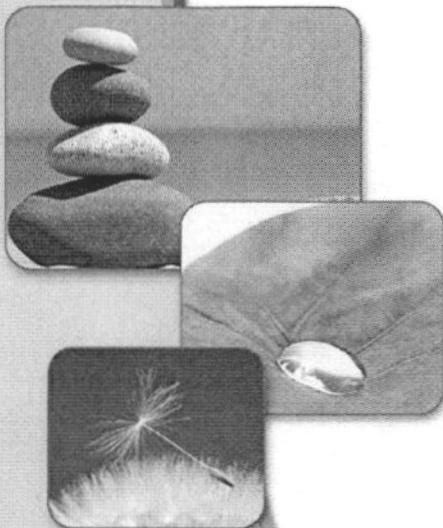
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5670 Greenwood Plaza Blvd Ste 540
Greenwood Village, CO 80111

Office: 303-790-1340
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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT



TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-77183-1

Client Project/Site: Stratus Redtail Ranch, LLC

For:

Geosyntec Consultants, Inc.

5670 Greenwood Plaza Blvd

Suite 540

Greenwood Village, Colorado 80111

Attn: Thomas J Krasovec

Authorized for release by:

5/3/2018 1:17:50 PM

David Dunlap, Senior Project Manager

(412)963-2432

david.dunlap@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Case Narrative

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Job ID: 180-77183-1

Laboratory: TestAmerica Pittsburgh

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Narrative

Job Narrative
180-77183-1

Receipt

The samples were received on 4/27/2018 8:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

GC/MS VOA

Method(s) 8260C: The following samples (totals analysis) were diluted to bring the concentration of target analytes within the calibration range: NLF-SS-PHASE2A-SP101-042518 (180-77183-1), NLF-SS-PHASE2A-SP102-042518 (180-77183-2), NLF-SS-PHASE2A-SP103-042518 (180-77183-3) and NLF-SS-PHASE2A-SP104-042518 (180-77183-4), NLF-SS-PHASE2A-SP105-042518 (180-77183-5), NLF-SS-PHASE2A-SP106-042518 (180-77183-6), NLF-SS-PHASE2A-SP107-042518 (180-77183-7), NLF-SS-PHASE2A-SP108-042518 (180-77183-8), and NLF-SS-PHASE2A-SP109-042518 (180-77183-9). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The recovery of surrogates 4-bromofluorobenzene and toluene-d8 were above the control limits in sample (TCLP analysis) NLF-SS-PHASE2A-SP106-042518 (180-77183-6). The matrix spikes also had the recoveries of 4-bromofluorobenzene above the control limits. Evidence of matrix interference is present; therefore, the results were reported.

Method(s) 8260C: The recovery of surrogate toluene-d8 was above the control limits in sample (TCLP analysis) NLF-SS-PHASE2A-SP109-042518 (180-77183-9). Evidence of matrix interference is present; therefore, the results were reported.

Method(s) 8260C: The matrix spike/matrix spike duplicate (MS/MSD) of sample (TCLP analysis) NLF-SS-PHASE2A-SP101-042518 (180-77183-1) had several recoveries outside of the control limits.

Method(s) 8260C: The matrix spike/matrix spike duplicate (MS/MSD) of sample (TCLP analysis) NLF-SS-PHASE2A-SP106-042518 (180-77183-6) had the RPD between the spikes above the control limits for benzene. The recoveries were within the control limits.

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 180-243682 was above criteria for the following analytes: bromomethane and trichlorofluoromethane. As these analytes were biased high in the CCV and were not detected in the associated sample, the results were reported.

Method(s) 8260C: The continuing calibration verifications (CCVs) analyzed in batch 180-243568 were below criteria for the following analytes: cyclohexanone, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2-dibromo-3-chloropropane, 1,2-dichlorobenzene, 1,4-dioxane, dichlorodifluoromethane, and vinyl chloride. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method(s) 8260C: The continuing calibration verification (CCV) analyzed in batch 180-243682 was above criteria for the following analytes: 4-methyl-2-pentanone, bromomethane, chloroethane, dichlorodifluoromethane, and trichlorofluoromethane. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8260C: The continuing calibration verifications (CCVs) analyzed in batch 180-243682 were below criteria for the following analytes: cyclohexanone, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, 1,2-dibromo-3-chloropropane, and 1,4-dioxane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value |
| X | Surrogate is outside control limits |
| F2 | MS/MSD RPD exceeds control limits |

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Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| D | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

TestAmerica Pittsburgh

Accreditation/Certification Summary

Client: Geosyntec Consultants, Inc.
 Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Laboratory: TestAmerica Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|------------------------|--------------------|------------|-----------------------|-----------------|
| A2LA | A2LA | | PA00164 | 07-31-18 |
| Arkansas DEQ | State Program | 6 | 88-0690 | 06-27-18 |
| California | State Program | 9 | 2891 | 04-30-19 |
| Connecticut | State Program | 1 | PH-0688 | 09-30-18 |
| Florida | NELAP | 4 | E871008 | 06-30-18 |
| Illinois | NELAP | 5 | 200005 | 06-30-18 |
| Kansas | NELAP | 7 | E-10350 | 01-31-19 |
| Louisiana | NELAP | 6 | 04041 | 06-30-18 |
| Nevada | State Program | 9 | PA00164 | 07-31-18 |
| New Hampshire | NELAP | 1 | 2030 | 04-04-19 |
| New Jersey | NELAP | 2 | PA005 | 06-30-18 |
| New York | NELAP | 2 | 11182 | 03-31-19 |
| North Carolina (WW/SW) | State Program | 4 | 434 | 12-31-18 |
| Oregon | NELAP Secondary AB | 10 | PA-2151 | 01-28-19 |
| Pennsylvania | NELAP | 3 | 02-00416 | 04-30-19 |
| South Carolina | State Program | 4 | 89014 | 04-30-18 * |
| Texas | NELAP | 6 | T104704528-15-2 | 03-31-19 |
| US Fish & Wildlife | Federal | | LE94312A-1 | 07-31-18 |
| USDA | Federal | | P330-16-00211 | 06-26-19 |
| Utah | NELAP | 8 | PA001462015-4 | 05-31-18 |
| Virginia | NELAP | 3 | 460189 | 09-14-18 |
| West Virginia DEP | State Program | 3 | 142 | 01-31-19 |
| Wisconsin | State Program | 5 | 998027800 | 08-31-18 |

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* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica Pittsburgh

Sample Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|-----------------------------|--------|----------------|----------------|
| 180-77183-1 | NLF-SS-PHASE2A-SP101-042518 | Solid | 04/25/18 10:36 | 04/27/18 08:50 |
| 180-77183-2 | NLF-SS-PHASE2A-SP102-042518 | Solid | 04/25/18 10:41 | 04/27/18 08:50 |
| 180-77183-3 | NLF-SS-PHASE2A-SP103-042518 | Solid | 04/25/18 10:46 | 04/27/18 08:50 |
| 180-77183-4 | NLF-SS-PHASE2A-SP104-042518 | Solid | 04/25/18 10:54 | 04/27/18 08:50 |
| 180-77183-5 | NLF-SS-PHASE2A-SP105-042518 | Solid | 04/25/18 10:57 | 04/27/18 08:50 |
| 180-77183-6 | NLF-SS-PHASE2A-SP106-042518 | Solid | 04/25/18 11:03 | 04/27/18 08:50 |
| 180-77183-7 | NLF-SS-PHASE2A-SP107-042518 | Solid | 04/25/18 11:11 | 04/27/18 08:50 |
| 180-77183-8 | NLF-SS-PHASE2A-SP108-042518 | Solid | 04/25/18 11:19 | 04/27/18 08:50 |
| 180-77183-9 | NLF-SS-PHASE2A-SP109-042518 | Solid | 04/25/18 11:25 | 04/27/18 08:50 |

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TestAmerica Pittsburgh

Method Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

| Method | Method Description | Protocol | Laboratory |
|-----------|-------------------------------------|----------|------------|
| EPA 8260C | Volatile Organic Compounds by GC/MS | SW846 | TAL PIT |
| 2540G | SM 2540G | SM22 | TAL PIT |
| 5030C | Purge and Trap | SW846 | TAL PIT |
| EPA 1311 | TCLP Extraction | SW846 | TAL PIT |

Protocol References:

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

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Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TestAmerica Pittsburgh

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Client Sample ID: NLF-SS-PHASE2A-SP101-042518

Lab Sample ID: 180-77183-1

Date Collected: 04/25/18 10:36

Matrix: Solid

Date Received: 04/27/18 08:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|------------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| TCLP | Leach | EPA 1311 | | | 25.48 g | 500 mL | 243432 | 04/28/18 15:30 | CMR | TAL PIT |
| TCLP | Analysis | EPA 8260C | | 1 | 0.125 mL | 5 mL | 243467 | 04/30/18 10:57 | KLG | TAL PIT |
| Total/NA | | Instrument ID: CHHP9 | | | | | | | | |
| Total/NA | Analysis | 2540G | | 1 | | | 243506 | 04/30/18 10:56 | TAM | TAL PIT |
| | | Instrument ID: NOEQUIP | | | | | | | | |

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Client Sample ID: NLF-SS-PHASE2A-SP101-042518

Lab Sample ID: 180-77183-1

Date Collected: 04/25/18 10:36

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 75.1

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|----------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5030C | | | 5.0020 g | 5 mL | 243427 | 04/28/18 13:56 | PJJ | TAL PIT |
| Total/NA | Analysis | EPA 8260C | | 100 | 0.1 mL | 5 mL | 243682 | 05/02/18 17:54 | PJJ | TAL PIT |
| | | Instrument ID: CHHP9 | | | | | | | | |

Client Sample ID: NLF-SS-PHASE2A-SP102-042518

Lab Sample ID: 180-77183-2

Date Collected: 04/25/18 10:41

Matrix: Solid

Date Received: 04/27/18 08:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|------------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| TCLP | Leach | EPA 1311 | | | 25.07 g | 500 mL | 243432 | 04/28/18 15:30 | CMR | TAL PIT |
| TCLP | Analysis | EPA 8260C | | 1 | 0.125 mL | 5 mL | 243467 | 04/30/18 13:54 | KLG | TAL PIT |
| Total/NA | | Instrument ID: CHHP9 | | | | | | | | |
| Total/NA | Analysis | 2540G | | 1 | | | 243506 | 04/30/18 10:56 | TAM | TAL PIT |
| | | Instrument ID: NOEQUIP | | | | | | | | |

Client Sample ID: NLF-SS-PHASE2A-SP102-042518

Lab Sample ID: 180-77183-2

Date Collected: 04/25/18 10:41

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 88.9

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|----------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5030C | | | 5.0009 g | 5 mL | 243427 | 04/28/18 13:56 | PJJ | TAL PIT |
| Total/NA | Analysis | EPA 8260C | | 50 | 0.1 mL | 5 mL | 243682 | 05/02/18 18:22 | PJJ | TAL PIT |
| | | Instrument ID: CHHP4 | | | | | | | | |

Client Sample ID: NLF-SS-PHASE2A-SP103-042518

Lab Sample ID: 180-77183-3

Date Collected: 04/25/18 10:46

Matrix: Solid

Date Received: 04/27/18 08:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|----------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| TCLP | Leach | EPA 1311 | | | 25.21 g | 500 mL | 243432 | 04/28/18 15:30 | CMR | TAL PIT |
| TCLP | Analysis | EPA 8260C | | 1 | 0.125 mL | 5 mL | 243467 | 04/30/18 14:16 | KLG | TAL PIT |
| | | Instrument ID: CHHP9 | | | | | | | | |

TestAmerica Pittsburgh

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Client Sample ID: NLF-SS-PHASE2A-SP105-042518

Lab Sample ID: 180-77183-5

Date Collected: 04/25/18 10:57

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 80.9

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5030C | | | 5.0300 g | 5 mL | 243427 | 04/28/18 13:56 | PJJ | TAL PIT |
| Total/NA | Analysis | EPA 8260C | | 300 | 0.1 mL | 5 mL | 243682 | 05/02/18 16:02 | PJJ | TAL PIT |

Instrument ID: CHHP4

Client Sample ID: NLF-SS-PHASE2A-SP106-042518

Lab Sample ID: 180-77183-6

Date Collected: 04/25/18 11:03

Matrix: Solid

Date Received: 04/27/18 08:50

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| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| TCLP | Leach | EPA 1311 | | | 25.06 g | 500 mL | 243432 | 04/28/18 15:30 | CMR | TAL PIT |
| TCLP | Analysis | EPA 8260C | | 1 | 0.125 mL | 5 mL | 243562 | 05/01/18 09:28 | KLG | TAL PIT |
| Total/NA | Analysis | 2540G | | | 1 | | 243506 | 04/30/18 10:56 | TAM | TAL PIT |

Instrument ID: CHHP9
Instrument ID: NOEQUIP

Client Sample ID: NLF-SS-PHASE2A-SP106-042518

Lab Sample ID: 180-77183-6

Date Collected: 04/25/18 11:03

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 84.7

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5030C | | | 5.0005 g | 5 mL | 243427 | 04/28/18 13:56 | PJJ | TAL PIT |
| Total/NA | Analysis | EPA 8260C | | 750 | 0.1 mL | 5 mL | 243682 | 05/02/18 16:30 | PJJ | TAL PIT |

Instrument ID: CHHP4

Client Sample ID: NLF-SS-PHASE2A-SP107-042518

Lab Sample ID: 180-77183-7

Date Collected: 04/25/18 11:11

Matrix: Solid

Date Received: 04/27/18 08:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| TCLP | Leach | EPA 1311 | | | 25.01 g | 500 mL | 243432 | 04/28/18 15:30 | CMR | TAL PIT |
| TCLP | Analysis | EPA 8260C | | 1 | 0.125 mL | 5 mL | 243467 | 04/30/18 15:43 | KLG | TAL PIT |
| Total/NA | Analysis | 2540G | | | 1 | | 243506 | 04/30/18 10:56 | TAM | TAL PIT |

Instrument ID: CHHP9
Instrument ID: NOEQUIP

Client Sample ID: NLF-SS-PHASE2A-SP107-042518

Lab Sample ID: 180-77183-7

Date Collected: 04/25/18 11:11

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 81.6

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5030C | | | 5.0160 g | 5 mL | 243427 | 04/28/18 13:56 | PJJ | TAL PIT |
| Total/NA | Analysis | EPA 8260C | | 100 | 0.1 mL | 5 mL | 243682 | 05/02/18 16:58 | PJJ | TAL PIT |

Instrument ID: CHHP4

TestAmerica Pittsburgh

Lab Chronicle

Client: Geosyntec Consultants, Inc.
 Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Client Sample ID: NLF-SS-PHASE2A-SP108-042518

Lab Sample ID: 180-77183-8

Date Collected: 04/25/18 11:19

Matrix: Solid

Date Received: 04/27/18 08:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| TCLP | Leach | EPA 1311 | | | 25.32 g | 500 mL | 243432 | 04/28/18 15:30 | CMR | TAL PIT |
| TCLP | Analysis | EPA 8260C | | 1 | 0.125 mL | 5 mL | 243467 | 04/30/18 16:05 | KLG | TAL PIT |
| Total/NA | Analysis | Instrument ID: CHHP9 2540G Instrument ID: NOEQUIP | | 1 | | | 243506 | 04/30/18 10:56 | TAM | TAL PIT |

Client Sample ID: NLF-SS-PHASE2A-SP108-042518

Lab Sample ID: 180-77183-8

Date Collected: 04/25/18 11:19

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 73.9

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|-----------------------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5030C | | | 5.0000 g | 5 mL | 243427 | 04/28/18 13:56 | PJJ | TAL PIT |
| Total/NA | Analysis | EPA 8260C Instrument ID: CHHP4 | | 250 | 0.1 mL | 5 mL | 243682 | 05/02/18 17:26 | PJJ | TAL PIT |

Client Sample ID: NLF-SS-PHASE2A-SP109-042518

Lab Sample ID: 180-77183-9

Date Collected: 04/25/18 11:25

Matrix: Solid

Date Received: 04/27/18 08:50

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|-----------------------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| TCLP | Leach | EPA 1311 | | | 25.41 g | 500 mL | 243432 | 04/28/18 15:30 | CMR | TAL PIT |
| TCLP | Analysis | EPA 8260C Instrument ID: CHHP9 | | 1 | 0.125 mL | 5 mL | 243562 | 05/01/18 09:49 | KLG | TAL PIT |
| Total/NA | Analysis | 2540G Instrument ID: NOEQUIP | | 1 | | | 243506 | 04/30/18 10:56 | TAM | TAL PIT |

Client Sample ID: NLF-SS-PHASE2A-SP109-042518

Lab Sample ID: 180-77183-9

Date Collected: 04/25/18 11:25

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 71.8

| Prep Type | Batch Type | Batch Method | Run | Dil Factor | Initial Amount | Final Amount | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|-----------------------------------|-----|------------|----------------|--------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 5030C | | | 5.0001 g | 5 mL | 243427 | 04/28/18 13:56 | PJJ | TAL PIT |
| Total/NA | Analysis | EPA 8260C Instrument ID: CHHP4 | | 250 | 0.1 mL | 5 mL | 243682 | 05/02/18 15:33 | PJJ | TAL PIT |

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TestAmerica Pittsburgh

Lab Chronicle

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Analyst References:

Lab: TAL PIT

Batch Type: Leach

CMR = Carl Reagle

Batch Type: Prep

PJJ = Patrick Journet

Batch Type: Analysis

KLG = Kathy Gordon

PJJ = Patrick Journet

TAM = Tessa Mastalski

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TestAmerica Pittsburgh

Client Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Client Sample ID: NLF-SS-PHASE2A-SP109-042518

Lab Sample ID: 180-77183-9

Date Collected: 04/25/18 11:25

Matrix: Solid

Date Received: 04/27/18 08:50

Percent Solids: 71.8

Method: EPA 8260C - Volatile Organic Compounds by GC/MS - TCLP (Continued)

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surf) | 108 | | 64 - 137 | | 05/01/18 09:49 | 1 |
| Toluene-d8 (Surf) | 140 X | | 82 - 132 | | 05/01/18 09:49 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture | 28.2 | | 0.1 | 0.1 | % | | | 04/30/18 10:56 | 1 |
| Percent Solids | 71.8 | | 0.1 | 0.1 | % | | | 04/30/18 10:56 | 1 |

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TestAmerica Pittsburgh

QC Sample Results

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

Method: EPA 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 180-77183-6 MSD

Client Sample ID: NLF-SS-PHASE2A-SP106-042518

Prep Type: TCLP

Matrix: Solid
Analysis Batch: 243562

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec. | RPD | Limit |
|------------------------------|---------------|----------------------|----------------------|---------------|---------------|------|-----|----------|-----|-------|
| Chlorobenzene | ND | | 1.60 | 1.70 | | mg/L | 106 | 78 - 118 | 7 | 15 |
| Chloroform | ND | | 1.60 | 1.47 | | mg/L | 92 | 68 - 124 | 10 | 15 |
| 1,2-Dichloroethane | ND | | 1.60 | 1.60 | | mg/L | 100 | 67 - 123 | 11 | 15 |
| 1,1-Dichloroethene | ND | | 1.60 | 1.85 | | mg/L | 116 | 59 - 128 | 9 | 17 |
| Tetrachloroethene | ND | | 1.60 | 1.71 | | mg/L | 107 | 78 - 118 | 10 | 20 |
| Trichloroethene | 0.072 | J | 1.60 | 1.95 | | mg/L | 117 | 76 - 120 | 10 | 15 |
| Vinyl chloride | ND | | 1.60 | 1.80 | | mg/L | 112 | 53 - 148 | 13 | 35 |
| Surrogate | | MSD %Recovery | MSD Qualifier | Limits | | | | | | |
| 4-Bromofluorobenzene (Surr) | 122 | X | | 65 - 116 | | | | | | |
| Dibromofluoromethane (Surr) | 92 | | | 72 - 120 | | | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 99 | | | 64 - 137 | | | | | | |
| Toluene-d8 (Surr) | 111 | | | 82 - 132 | | | | | | |

Method: 2540G - SM 2540G

Lab Sample ID: 180-77183-9 DU

Client Sample ID: NLF-SS-PHASE2A-SP109-042518

Prep Type: Total/NA

Matrix: Solid
Analysis Batch: 243506

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | Limit |
|------------------|---------------|------------------|-----------|--------------|------|---|-----|-------|
| Percent Moisture | 28.2 | | 28.2 | | % | | 0.1 | 20 |
| Percent Solids | 71.8 | | 71.8 | | % | | 0 | 20 |

TestAmerica Pittsburgh

QC Association Summary

Client: Geosyntec Consultants, Inc.
Project/Site: Stratus Redtail Ranch, LLC

TestAmerica Job ID: 180-77183-1

GC/MS VOA (Continued)

Analysis Batch: 243562 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|-----------------------------|-----------|--------|-----------|------------|
| 180-77183-9 | NLF-SS-PHASE2A-SP109-042518 | TCLP | Solid | EPA 8260C | 243432 |
| LB 180-243432/1-A | Method Blank | TCLP | Solid | EPA 8260C | 243432 |
| LCS 180-243562/3 | Lab Control Sample | Total/NA | Solid | EPA 8260C | |
| 180-77183-6 MS | NLF-SS-PHASE2A-SP106-042518 | TCLP | Solid | EPA 8260C | 243432 |
| 180-77183-6 MSD | NLF-SS-PHASE2A-SP106-042518 | TCLP | Solid | EPA 8260C | 243432 |

Analysis Batch: 243568

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|-----------------------------|-----------|--------|-----------|------------|
| 180-77183-3 | NLF-SS-PHASE2A-SP103-042518 | Total/NA | Solid | EPA 8260C | 243427 |
| 180-77183-4 | NLF-SS-PHASE2A-SP104-042518 | Total/NA | Solid | EPA 8260C | 243427 |

Analysis Batch: 243682

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|-----------------------------|-----------|--------|-----------|------------|
| 180-77183-1 | NLF-SS-PHASE2A-SP101-042518 | Total/NA | Solid | EPA 8260C | 243427 |
| 180-77183-2 | NLF-SS-PHASE2A-SP102-042518 | Total/NA | Solid | EPA 8260C | 243427 |
| 180-77183-5 | NLF-SS-PHASE2A-SP105-042518 | Total/NA | Solid | EPA 8260C | 243427 |
| 180-77183-6 | NLF-SS-PHASE2A-SP106-042518 | Total/NA | Solid | EPA 8260C | 243427 |
| 180-77183-7 | NLF-SS-PHASE2A-SP107-042518 | Total/NA | Solid | EPA 8260C | 243427 |
| 180-77183-8 | NLF-SS-PHASE2A-SP108-042518 | Total/NA | Solid | EPA 8260C | 243427 |
| 180-77183-9 | NLF-SS-PHASE2A-SP109-042518 | Total/NA | Solid | EPA 8260C | 243427 |

General Chemistry

Analysis Batch: 243506

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|----------------|-----------------------------|-----------|--------|--------|------------|
| 180-77183-1 | NLF-SS-PHASE2A-SP101-042518 | Total/NA | Solid | 2540G | |
| 180-77183-2 | NLF-SS-PHASE2A-SP102-042518 | Total/NA | Solid | 2540G | |
| 180-77183-3 | NLF-SS-PHASE2A-SP103-042518 | Total/NA | Solid | 2540G | |
| 180-77183-4 | NLF-SS-PHASE2A-SP104-042518 | Total/NA | Solid | 2540G | |
| 180-77183-5 | NLF-SS-PHASE2A-SP105-042518 | Total/NA | Solid | 2540G | |
| 180-77183-6 | NLF-SS-PHASE2A-SP106-042518 | Total/NA | Solid | 2540G | |
| 180-77183-7 | NLF-SS-PHASE2A-SP107-042518 | Total/NA | Solid | 2540G | |
| 180-77183-8 | NLF-SS-PHASE2A-SP108-042518 | Total/NA | Solid | 2540G | |
| 180-77183-9 | NLF-SS-PHASE2A-SP109-042518 | Total/NA | Solid | 2540G | |
| 180-77183-9 DU | NLF-SS-PHASE2A-SP109-042518 | Total/NA | Solid | 2540G | |

TestAmerica Pittsburgh

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301 Alpha Drive

Chain of Custody Record

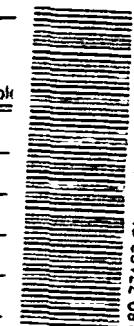
182607

TestAmerica
100% LABORATORY TESTED
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Pittsburgh, PA 15238
Phone: 412.963.7050 Fax: 412.963.2470

Regulatory Program: DW NFEES RCRA Other:

| | | | | | | | |
|---|-----------------------------|--|---|---|-------------------------------|--|--------|
| Client Contact | | Project Manager: Patrick Medley / T Tel/Fax: 303 710-1340 | | Site Contact: P. Medley Lab Contact: D. Dunker | | Date: 4/15/18 | COC No |
| Company Name: Geosyntec | | Analysis Turnaround Time X CALENDAR DAYS WORKING DAYS | | | | I. at I COCs | |
| Address: 5670 Greenwood Park Blvd., Ste 570 City, State Zip: Greenwood Village, CO 80111 Phone: 303-710-1340 Fax: | | TAT if different from Below 2 weeks 1 week OR ASAP 1 day 1 day | | | | Sampler For Lab Use Only: Walk in Client Lab Sampling | |
| Project Name: Stratus Residential Ranch Site: Eric CO PO #: DEB302 | | | | | | Job / SDG No: | |
| Sample Identification | | Sample Date | Sample Time | Sample Type (C=Comp, G=Grab) | Matrix | # of Cont. | Sample |
| NLF-SS-PHASE2A-SP101-042514 | | 4/15/18 | 1036 | G | Sed | 2 | |
| NLF-SS-PHASE2A-SP102-042514 | | | 1041 |) |) |) | |
| NLF-SS-PHASE2A-SP103-042514 | | | 1046 |) |) |) | |
| NLF-SS-PHASE2A-SP104-042514 | | | 1054 |) |) |) | |
| NLF-SS-PHASE2A-SP105-042514 | | | 1057 |) |) |) | |
| NLF-SS-PHASE2A-SP106-042514 | | | 1103 |) |) |) | |
| NLF-SS-PHASE2A-SP107-042514 | | | 1111 |) |) |) | |
| NLF-SS-PHASE2A-SP108-042514 | | | 1119 |) |) |) | |
| NLF-SS-PHASE2A-SP109-042514 | | V | 1125 | V | V | V | |
| Preservation Used: 1= Ico, 2= HCl; 3= H ₂ SO ₄ ; 4= HNO ₃ ; 5= NaOH; 6= Other | | | | | | | |
| Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample | | | | | | | |
| | | | | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) Return to Client <input checked="" type="checkbox"/> Disposed by Lab <input checked="" type="checkbox"/> Retained for 1 Months | | | |
| Special Instructions/QC Requirements & Comments: See project specific list for VOCs | | | | | | | |
| Custody Seal intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Custody Seal No: | | Cooler Temp. (°C): Obs'd _____ | | Corr'd. _____ | Therm ID No. _____ | |
| Reinforced by <i>[Signature]</i> | Company: Geosyntec | Date/Time: 4/25/18 10:00 | Received by: <i>[Signature]</i> | Company: TAL | Date/Time: 4/25/18 16:30 | | |
| Reinforced by <i>[Signature]</i> | Company: TAL | Date/Time: 4/25/18 16:30 | Received by: <i>[Signature]</i> | Company: TAL | Date/Time: 4/27/18 8:50 | | |
| Reinforced by <i>[Signature]</i> | Company: <i>[Signature]</i> | Date/Time: <i>[Signature]</i> | Received in Laboratory by: <i>[Signature]</i> | Company: <i>[Signature]</i> | Date/Time: <i>[Signature]</i> | | |



Login Sample Receipt Checklist

Client: Geosyntec Consultants, Inc.

Job Number: 180-77183-1

Login Number: 77183

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Watson, Debbie

| Question | Answer | Comment |
|--|--------|---------|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | False | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

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